

REMARKS

Claim Status

Claims 1-24 were originally presented for examination in this application. In a preliminary amendment filed on May 14, 2004, Applicants added new claims 25-31. A restriction requirement was issued on April 25, 2007, and Applicants elected claims 1-21 and 25-31 in response thereto. An office action was issued on August 24, 2007, in which:

- The specification was object to based on a omission of a description of FIG. 17. Applicants have amended the specification to address this objection.
- Claims 1, 2, 8, 9, 12, 13, 15, 16, 19, 25, 26 and 29 were rejected under 35 U.S.C. §103(a) as being obvious in light of U.S. Patent No. 6,359,647 to Sengupta et al. (“Sengupta”) further in view of U.S. Patent No. 6,570,608 to Tserng (“Tserng”).
- Claims 3 – 7 were rejected under 35 U.S.C. §103(a) as being obvious in light of Sengupta and Tserng and further in view of U.S. Patent No. 5,845,009 to Marks et al. (“Marks”).
- Claims 10, 11, 17, 18, 20, 27, 28 and 30 were rejected under 35 U.S.C. §103(a) as being obvious in light of Sengupta and Tserng and further in view of U.S. Patent No. 6,371,805 to Brodsky et al. (“Brodsky”).
- Claims 14, 21 and 31 were rejected under 35 U.S.C. §103(a) as being obvious in light of Sengupta and Tserng and further in view of U.S. Patent No. 6,441,846 to Carlbom et al. (“Carlbon”).

In response, Applicants have amended claims 1, 15, 17, 18, 19, 20 and 21. Support for the amendments can be found at least at paragraph [0073] of the application as published.

Interview Summary

Applicants thank Examiner Czekaj for his time and courtesy extended during the telephonic interview with Applicants' attorney on October 17, 2007, and for helpful suggestions following regarding the claim amendments.

Claim Rejections Under 35 U.S.C. §103(a)

Independent claims 1, 15, 17, 18, 19, 20 and 21 as amended each recite using video frames generated "over time" to track objects as they traverse a monitored environment in a manner that is "independent of calibration among the image sensors and the monitored environment." In contrast, each of the cited references is expressly dependent upon calibration to effectuate camera handoffs and object tracking.

Serengupta describes a video surveillance system that tracks objects through a monitored environment based on "a representation of each camera's location and potential field of view, relative to each other." Serengupta, col. 4, line 47. More specifically, "the camera locations are provided relative to the site plan of the secured area." Serengupta, col. 4, line 49. Clearly, the techniques described by Serengupta rely heavily on calibration among the cameras and a site plan.

Tseng also relies on calibration between the monitored environment and the cameras. Specifically, "the system includes an image coordinate to world coordinate mapping." Tseng, col. 8, line 38. Tseng explains that "this mapping is based on quadrilaterals that map horizontal planes in an image to horizontal areas in a floor map." Tseng, col. 8, line 39. It is this very calibration that permits the Tseng system to determine an object's actual size from its apparent size in a video image. Like Serengupta, Tseng relies on a calibration of the cameras to a floor map in order to function.

The present invention, by contrast, can track objects as they pass through a monitored environment independent of such calibration constraints. Instead of relying on mappings and coordinates, Applicants' system analyzes video frames over time to determine proper camera hand-offs and transitions, thus eliminating the need for floor plans, layouts or camera positioning calculations both at the time of implementation and when floorplans or camera positions change – a costly and time consuming drawback to both the Serengupta and Tseng systems.

Thus, because neither Serengupta nor Tseng teaches or suggests every element of independent claims 1, 15, 17, 18, 19, 20 and 21 as amended, Applicants respectfully submit that these references, alone or in combination, fail to anticipate these claims or render the claims as obvious. Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 15, 17, 18, 19, 20 and 21 under 35 U.S.C. §103(a), as well as those claims that depend directly or indirectly therefrom.

CONCLUSION

Applicants respectfully requests allowance of claims 1-21 and 25-31 in due course. The Examiner is invited to contact Applicants' undersigned representative by telephone at the number listed below to discuss any outstanding issues.

Respectfully submitted,

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